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Dkt. 0655/67115-A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Qian Yang, et al.
Serial No. : 10/760,511
Filed : January 20, 2004
For : USING NEURAL NETWORKS FOR DATA MINING

1185 Avenue of the Americas
New York, New York 10036

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SIR:

INFORMATION DISCLOSURE STATEMENT

Pursuant to the applicant's duty of disclosure, the information listed in the attached Form PTO-1449 is brought to the attention of the Examiner. A copy of the information listed in the annexed Form PTO-1449 is also provided.

It is respectfully requested that the information cited in the annexed Form PTO-1449 be considered by the Examiner in connection with the above-identified patent application, and that such art be made of record in said application.

The citation of the listed items is not a representation that they constitute a complete or exhaustive listing of the relevant art or that these items are prior art. The items listed are submitted in good faith, but are not intended to substitute for the Examiner's search. It is hoped, however, that in addition to apprising the Examiner of the particular items, they will assist in identifying fields of search and in making as full and complete a search as possible.

The filing of this Information Disclosure Statement is not an admission that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

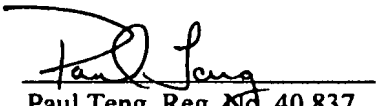
This Information Disclosure Statement is being filed pursuant to 37 C.F.R. §1.97(b)(3). To the best of Applicant's knowledge, this Information Disclosure Statement is being filed before the date of mailing of a first Office Action on the merits in connection with this case.

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Page 2

The Office is hereby authorized to charge any additional fees which may be required for consideration of this Information Disclosure Statement and to credit any overpayment to our Deposit Account No. 03-3125.

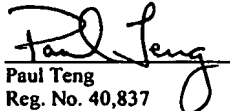
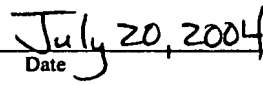
If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone him at the number provided below.

Respectfully submitted,


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I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to:

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Paul Teng Date
Reg. No. 40,837



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| Form PTO-549 U.S. Department of Commerce Patent and Trademark Office | Atty. Docket No. 0655/67115-A | Serial No. 10/760,511 |
| INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) | | |
| Applicants: Qian YANG, et al. | | Filing Date: January 20, 2004 |
| Group Art Unit: | | |

U.S. PATENT DOCUMENTS

| Examiner Initial | Document Number | Date | Name | Class | Subclass | Filing Date if Appropriate |
|------------------|-----------------|---------|-----------------|-------|----------|----------------------------|
| WSI | 4 1 9 3 1 1 5 | 3-11-80 | Albus | | | |
| WSI | 4 2 1 5 3 9 6 | 7-29-80 | Henry et al. | | | |
| WSI | 4 4 3 8 4 9 7 | 3-20-84 | Willis et al. | | | |
| WSI | 4 6 4 9 5 1 5 | 3-10-87 | Thompson et al. | | | |
| WSI | 4 6 6 3 7 0 3 | 5-5-87 | Axelby et al. | | | |
| WSI | 4 6 7 0 8 4 8 | 6-2-87 | Schramm | | | |
| WSI | 4 7 4 0 8 8 6 | 4-26-88 | Tanifuji et al. | | | |
| WSI | 4 7 5 4 4 1 0 | 6-28-88 | Leech et al. | | | |
| WSI | 4 8 5 8 1 4 7 | 8-15-89 | Conwell | | | |
| WSI | 4 9 2 8 4 8 4 | 5-29-90 | Peczkowski | | | |

FOREIGN PATENT DOCUMENTS

| Document Number | Date | Country | Class | Subclass | Translation | |
|-----------------|------|---------|-------|----------|-------------|----|
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|-----|--|
| WSI | Surajit Chaudhuri, Usama Fayyad and Jeff Bernhardt, "Scalable Classification over SQL Databases", <u>Proceedings of the 15th International Conference on Data Engineering</u> , 23-26 March 1999, Sidney, Australia, pp. 470-479; |
| WSI | Dennis T. Lee, Yoh-Han Pao and Dejan J. Sobajic "Dynamic System Control Using Neural Networks", pp.25-30; |
| WSI | Yoh-Han Pao "Neural Net Computing For Patter Recognition" <u>Handbook of Pattern Recognition and Computer Vision</u> , pp. 125-162 (edited by C.H. Chen, L.F. Pau and P.S.P. Wang); |
| WSI | Bernard Widrow, Narendra K. Gupta, and Sidhartha Maitra (September 1973) "Punish/Reward: Learning With a Critic in Adaptive Threshold Systems", <u>IEEE Trans. Systems, Man and Cybernetics</u> , Vol. SMC-3, No. 5, pp. 455-465; |
| WSI | John A. Hartigan, (1975) "Interpretation and Evaluation of Clusters", <u>Clustering Algorithms</u> , pp. 12-14; |
| WSI | Yoh-Han Pao and Dejan J. Sobajic (1987) "Metric Synthesis and Concept Discovery With Connectionist Networks", <u>1987 IEEE</u> , pp. 390-395; |
| WSI | Bernard Widrow and Rodney Winter (March 1988) "Neural Nets for Adaptive Filtering and Adaptive Pattern Recognition", <u>IEEE Computer</u> , pp. 25-39; |

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| EXAMINER /Wilbert L. Starks, Jr./ | DATE CONSIDERED 07/09/2007 |
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*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| Form PTO-1449 | | U.S. Department of Commerce Patent and Trademark Office | | Atty. Docket No. 0655/67115-A | | Serial No. 10/760,511 | | | | | | |
| INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) | | | | Applicants: Qian YANG, et al. | | | | | | | | |
| | | | | Filing Date: January 20, 2004 | | Group Art Unit: | | | | | | |
| U.S. PATENT DOCUMENTS | | | | | | | | | | | | |
| Examiner Initial | Document Number | | | | | | Date | Name | Class | Subclass | Filing Date if Appropriate | |
| /WS/ | 4 | 9 | 7 | 2 | 3 | 6 | 3 | 11-20-90 | Nguyen et al. | | | |
| /WS/ | 4 | 9 | 7 | 9 | 1 | 2 | 6 | 12-18-90 | Pao et al. | | | |
| /WS/ | 4 | 9 | 9 | 4 | 9 | 8 | 2 | 2-19-91 | Duranton et al. | | | |
| /WS/ | 5 | 0 | 2 | 3 | 0 | 4 | 5 | 6-11-91 | Watanabe et al. | | | |
| /WS/ | 5 | 0 | 5 | 2 | 0 | 4 | 3 | 9-24-91 | Gaborski | | | |
| /WS/ | 5 | 1 | 1 | 1 | 5 | 3 | 1 | 5-5-92 | Grayson et al. | | | |
| /WS/ | 5 | 1 | 1 | 3 | 4 | 8 | 3 | 5-12-92 | Keeler et al. | | | |
| /WS/ | 5 | 1 | 1 | 9 | 6 | 4 | 8 | 6-2-92 | Owens | | | |
| /WS/ | 5 | 1 | 4 | 0 | 5 | 2 | 3 | 8-18-92 | Frankel et al. | | | |
| /WS/ | 5 | 1 | 4 | 2 | 6 | 1 | 2 | 8-25-92 | Skeirik | | | |
| FOREIGN PATENT DOCUMENTS | | | | | | | | | | | | |
| | Document Number | | | | | | Date | Country | Class | Subclass | Translation | |
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| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | | | | | | | | |
| /WS/ | Bernard Widrow, Rodney G. Winter, and Robert A. Baxter (July 1988) "Layered Neural Nets for Pattern Recognition", IEEE Trans. Acoustics, Speech, and Signal Processing, Vol. 36, No. 7, pp. 1109-1118; | | | | | | | | | | | |
| /WS/ | Yoh-Han Pao, (1989) Adaptive Pattern Recognition and Neural Networks; | | | | | | | | | | | |
| /WS/ | Andrew G. Barto (1990) "Connectionist Learning for Control", Neural Networks for Control, pp. 5-58 (edited by W. Thomas Miller, III, Richard S. Sutton and Paul J. Werbos); | | | | | | | | | | | |
| /WS/ | R.D. Coyne and A.G. Postmus (1990) "Spatial Applications of Neural Networks in Computer-aided Design", Artificial Intelligence in Engineering, 5(1):9-22; | | | | | | | | | | | |
| /WS/ | Kumpati S. Narendra and Kannan Parthasarathy (March 1990) "Identification and Control of Dynamical Systems Using Neural Networks", IEEE Trans. Neural Networks, Vol. 1, No. 1, pp. 4-27; | | | | | | | | | | | |
| /WS/ | Maryhelen Stevenson, Rodney Winter, and Bernard Widrow (March 1990) "Sensitivity of Feedforward Neural Networks to Weight Errors", IEEE Trans. Neural Networks, Vol. 1, No. 1, pp. 71-80; | | | | | | | | | | | |
| /WS/ | Esther Levin, Naftali Tishby, and Sara A. Solla (October 1990) "A Statistical Approach to Learning and Generalization in Layered Neural Networks", Proc. IEEE, Vol. 78, No. 10, pp. 1568-1574; | | | | | | | | | | | |
| EXAMINER /Wilbert L. Starks, Jr./ | | | | | | DATE CONSIDERED 07/09/2007 | | | | | | |
| *EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. | | | | | | | | | | | | |

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| Form PTO-1449 | | U.S. Department of Commerce Patent and Trademark Office | | Atty. Docket No. 0655/67115-A | Serial No. 10/760,511 |
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| | | | | Filing Date: January 20, 2004 | Group Art Unit: |

| U.S. PATENT DOCUMENTS | | | | | | | | | | | | |
|------------------------------|-----------------|---|---|---|---|---|---|----------|------------------|-------|----------|----------------------------|
| Examiner Initial | Document Number | | | | | | | Date | Name | Class | Subclass | Filing Date if Appropriate |
| WWS/ | 5 | 1 | 7 | 5 | 6 | 7 | 8 | 12-29-92 | Frerichs et al. | | | |
| WWS/ | 5 | 1 | 7 | 5 | 7 | 9 | 7 | 12-29-92 | Funabashi et al. | | | |
| WWS/ | 5 | 2 | 4 | 7 | 4 | 4 | 5 | 9-21-93 | Miyano et al. | | | |
| WWS/ | 5 | 3 | 1 | 1 | 4 | 2 | 1 | 5-10-94 | Nomura et al. | | | |
| WWS/ | 5 | 3 | 3 | 5 | 2 | 9 | 1 | 8-2-94 | Kramer et al. | | | |
| WWS/ | 5 | 3 | 4 | 9 | 5 | 4 | 1 | 9-20-94 | Alexandro et al. | | | |
| WWS/ | 5 | 4 | 8 | 5 | 3 | 9 | 0 | 1-16-96 | LeClair et al. | | | |
| WWS/ | 5 | 7 | 3 | 4 | 7 | 9 | 6 | 3-31-98 | Pao | | | |
| WWS/ | 5 | 8 | 4 | 8 | 4 | 0 | 2 | 12-8-98 | Pao et al. | | | |
| WWS/ | 6 | 1 | 3 | 4 | 5 | 3 | 7 | 10-17-00 | Pao et al. | | | |

| FOREIGN PATENT DOCUMENTS | | | | | | | | | | | | | |
|---------------------------------|-----------------|--|--|--|--|--|--|------|---------|-------|----------|-------------|----|
| | Document Number | | | | | | | Date | Country | Class | Subclass | Translation | |
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| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | |
|---|---|
| WWS/ | Les Atlas, Jerome Connor and Mark Damborg (1991) "Comparisons of Conventional Techniques and Neural Network in Computer-aided Design", Artificial Intelligence in Engineering, 5(1):9-22; |
| WWS/ | Miodrag Djukanov, Borivoje Babic, Dijan J. Sobajic and Yoh-Han Pao (1991) "Unsupervised/Supervised Learning Concept for 24-Hour Load Forecasting", Artificial Intelligence in Engineering, pp.819-827; |
| WWS/ | M.M. Gupta and J. Qi (1991) "Fusion of Fuzzy Logic and Neural Networks with Applications to Decision and Control Problems", Proceedings of the 1991 American Control Conference, pp. 1:30-31; |
| WWS/ | Jocelyn Sietsma and Robert J. F. Dow (1991) "Creating Artificial Neural Networks That Generalize", Neural Networks, Vol. 4, pp. 67-79; |
| WWS/ | Petros A. Ioannou and Aniruddha Datta (December 1991) "Robust Adaptive Control: A Unified Approach", Proc. IEEE, Vol. 79, No. 12, pp. 1736-1768; |
| WWS/ | S.A. Billings, H.B. Jamaluddin and S. Chen (1992) "Properties of neural networks with applications to modeling non-linear dynamical systems", Int. J. Control, pp. 55(1):193-224; |
| WWS/ | John Doleac, Jeff Getchius, Judy Franklin and Chuck Anderson (1992) "Nadaline Connectionist Learning vs. Linear Regression at a Lamp Manufacturing Plant", Proceedings of The First IEEE Conference on Control Applications, pp. 552-558; |

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|---|-----------------------------------|
| EXAMINER /Wilbert L. Starks, Jr./ | DATE CONSIDERED 07/09/2007 |
|---|-----------------------------------|

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| U.S. PATENT DOCUMENTS | | | | | | | | | | | | | | |
| Examiner Initial | | Document Number | | | Date | Name | Class | Subclass | Filing Date if Appropriate | | | | | |
| WS/ | | 6 | 3 | 2 | 7 | 5 | 5 | 0 | 12-4-01 | Vinberg et al. | | | | |
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| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | | | | | | | | | | |
| WS/ | | William Finnoff, Ferdinand Hergert, and Hans Georg Zimmerman (1993) "Improving Model Selection by Nonconvergent Methods", Neural Networks, Vol. 6, pp. 771-783; | | | | | | | | | | | | |
| WS/ | | Andreas Ikononopoulos, Lefteri H. Tsoukalas and Robert E. Uhrig (1993) "A Hybrid Neural Networ-Fuzzy Arithmetic Methodology For Performing Virtual Measurements in a Complex System", Proceedings of the Thirty-Sixth Power Instrumentation Symposium, pp.205-212; | | | | | | | | | | | | |
| WS/ | | Michael Nikolaou (1993) "Neural Network Modeling of Nonlinear Dynamical Systems", Proceeding of the 1993 American Control Conference, pp. 1460-1464; | | | | | | | | | | | | |
| WS/ | | Stevan V. Odri, Dusan P. Petrovacki, and Gorana A. Krstonosic (1993) "Evolutional Development of a Multilevel Neural Network", Neural Networks, Vol. 6, pp. 583-595; | | | | | | | | | | | | |
| WS/ | | Yoh-Han Pao and Gwang-Hoon Park (1993) "Neural-Net Computing for Machine Recognition o Handwritten English Language text", Fundamentals of Handwriting Recognition, pp.335-351; | | | | | | | | | | | | |
| WS/ | | Mujeeb M. Ahmed (1994) "An Integrated Approach to Distributed Intelligent Control", Proceeding of the Thirty-Seventh Power Instrumentation Symposium, pp. 1-15; | | | | | | | | | | | | |
| WS/ | | Timothy J. Graettinger, Naveen V. Bhat and Jeffrey S. Buck (1994) "Adaptive Control with NeuCOP, the Neural Control and Optimization Package, IEEE, pp. 2389-2393; | | | | | | | | | | | | |
| EXAMINER | | | | | DATE CONSIDERED | | | | | | | | | |
| Wilbert L. Starks, Jr./ | | | | | 07/09/2007 | | | | | | | | | |
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